ELECTRONIC SYSTEMS AND METHODS FOR PROVIDING
A TRADING INTERFACE WITH ADVANCED FEATURES

Cross-Reference to Related Application

[0001]   This application claims the benefit of U.S.
5   provisional application No. 60/423,618, filed
October 31, 2002, which is hereby incorporated by
reference herein in its entirety.

Background of the Invention

10   [0002]   This invention relates to trading application
program interfaces. More particularly, this invention
relates to a trading interface having advanced
features.
[0003]   Electronically based trading systems have
15   gained widespread popularity in recent years. Such
trading systems are frequently used for trading items
ranging from financial instruments (such as stocks,
bonds, currency, futures contracts, etc.) to household
goods (such as old records, antiques, wines, etc.). In
20   many of these trading systems, bid/offer-hit/take
processes are used to negotiate a sale of a given item.
In connection with such processes, bids and/or offers
for items are entered into a trading system and a hit

or take is submitted in response to a bid or an offer, respectively, to agree to a sale.

[0004] Today, these trading systems are being developed with advanced processing circuitry and sufficient memory to support new types of software applications not previously envisioned. A challenge created by the new types of software applications is the ability to offer advanced features consistent with users' expectations of a trading interface environment.

[0005] Many implementations of electronic trading, while generally accurate, lack in desired speed mainly because traders are forced to use both a standard keyboard and a mouse to execute a trade. This dual process causes much delay for traders because the traders must follow several steps prior to executing a trade. For example, many traders using typical trading systems are required to click on an issue of choice, click on a buy or a sell button, and use the keyboard to enter a price and size for the trade.

[0006] The benefit of using a keyboard to execute a trade is that a trader may execute a trade with a great deal more speed than with a mouse. Specifically, with a keyboard, the trader may use all ten fingers, while with a mouse the trader may use two fingers at most.

[0007] Despite the drawbacks associated with using a mouse, many traders continue to use a mouse because it is considered easy to use, and thus traders feel that they are less likely to make unwarranted trading mistakes with a mouse. Because trading professionals frequently have large amounts of money at stake when trading, many professionals prefer to forgo speed and efficiency for peace of mind.

[0008]   While mouse-based interfaces have existed for years, these interfaces have put traders using them at a disadvantage when competing with full-time keyboard traders.   One reason the existing mouse-based

5   interfaces place those traders at a disadvantage is that those traders are forced to physically move a mouse pointer from an indicator for a desired instrument, that is at some given point on a trading screen, to some other point on the screen where

10   bidding/offering and buying/selling commands can be entered.   This approach is very time-consuming and additionally distracts traders from focusing on market movements and other trades while they attempt to execute their trades.

15   [0009]   Furthermore, traders may be interested in Treasuries other than the most recently issued Treasuries (i.e., the benchmark issue).   The most recently issued Treasuries are said to be on-the-run. Other Treasuries are said to be off-the-run (i.e., non-

20   benchmark issues).   Because off-the-run Treasuries may lack liquidity, they routinely trade at spreads over comparable on-the-run Treasuries.   Consequently, off-the-run Treasuries trade at slightly lower prices and higher yields.

25   [0010]   Trading systems vary in the type and scope of features that they provide.   Typical trading systems allow traders to trade on a benchmark or a non-benchmark issue by selecting the issue of choice, using a mouse to select a buy or a sell button, and using the

30   keyboard to enter a price and size for the trade.   One drawback of these trading systems is that non-benchmark issues are not easily accessible from the related benchmark issue.

[0011]   In view of the foregoing, it would be
desirable to provide enhanced features and applications
for a trading interface environment that enables a
trader to execute trades on benchmark issues and non-
5   benchmark issues quickly, efficiently, and accurately
without the use of a pointing device.

Summary of the Invention

[0012]   In accordance with this and other objects of
10   the invention, a trading interface having advanced
features is provided. More particularly, in accordance
with this invention, the trader can use various trading
interfaces to create orders, manipulate orders, cancel
orders, cycle through multiple issues, obtain trading
15   information more relevant than limit price stacks
(e.g., through different types of quadrants), or
efficiently buy or sell items inside or within the
spread market.

[0013]   Traders may use a customized keyboard to
20   navigate through the trading interface. The keyboard
preferably includes issue keys that are pre-programmed
to reflect the issues present in each trading quadrant,
or "quad," where key trading indicators are displayed.
Using the issue keys on the keyboard, the trader may
25   direct the trading application to quickly and
efficiently switch between multiple issues in a quad
(e.g., the benchmark issue and non-benchmark issues).

[0014]   Using the keyboard, the trader may also be
provided with price improvement functionality. The
30   keyboard preferably includes a price improvement ("PI")
key. If desired, the PI key may be a BEST PI key.
Submitting an order with a BEST PI level by, for
example, pressing the PI key, may automatically allow

the order to jump in front of other prices in the
market, including other price improved prices.

[0015]   The trader may also be provided with direct
dealing or request for quote functionality. More
particularly, the keyboard preferably includes a direct
dealing ("DD") key. Using the DD key along with other
keys on the keyboard, the trader may perform such
functions as request a quote, respond with a price,
cancel a response, amend a response, or accept a
response. In some embodiments, the trading application
may simultaneously display a DD ticker along with the
trading quadrant that provides the trader with the
progression of the direct dealings of the selected
issue.

[0016]   Trading interfaces may also be provided. In
response to initiating the trading application, the
trading application may display the four benchmark U.S.
Treasury bonds in a four quad layout. Each quad
provides the trader with trading information. Each
quad may also include non-benchmark issues that may be
selected, for example, in response to a trader pressing
one of the issue keys on the keyboard. The trading
application may also provide the trader with the
ability to obtain trading information (e.g., in the
form of another quad) for each of the related U.S.
Treasury swaps ("T-swaps"), off-the-runs, yield curve
T-swaps, and basis.

Brief Description of the Drawings

[0017]   The above and other objects and advantages of
the invention will be apparent upon consideration of
the following detailed description, taken in
conjunction with accompanying drawings, in which like

reference refers to like parts throughout, and in which:

[0018]   FIG. 1 is a block diagram of a system that may be used to implement processes and functions of certain embodiments of the present invention;

[0019]   FIG. 2 is a block diagram of a workstation, a server, and a back office clearing center that may be used to implement the processes and functions of certain embodiments of the present invention;

[0020]   FIG. 3 is an illustrative schematic view of a keyboard that may be used to implement the processes and functions of certain embodiments of the present invention;

[0021]   FIGS. 4 and 5 are illustrative interfaces that include trading quadrants for interactive trading that may be generated in accordance with certain embodiments of the present invention;

[0022]   FIG. 6 is a flow diagram of a process that may be used to allow traders to switch between multiple issues in a trading quadrant in accordance with certain embodiments of the present invention; and

[0023]   FIG. 7 is a flow diagram of a process that may be used to provide traders with updated direct dealing content in accordance with certain embodiments of the present invention.

Detailed Description of the Invention

[0024]   This invention relates to systems and methods for providing a trading interface with advanced features. The following embodiment of the invention relates to the electronic trading of fixed income related instruments -- e.g., such as the United States Treasuries, United Kingdom Gilts, European Government

Treasuries, and Emerging Market debts, swaps, repos, etc. This invention may also be used for the electronic trading of securities or other financial instruments, such as stocks or currencies, and is not

5   limited only to the trading of fixed income related instruments. Nevertheless, this embodiment does not limit the invention to this particular subject matter. Rather, it is provided for illustration of the invention and not to limit it to a particular commodity

10   or market.

[0025]   It should also be noted that although the following embodiment of the invention relates to the trading of a single instrument, such as 30 Year U.S. Treasury bonds, this embodiment is not limited only to

15   the trading of a single instrument. Rather, the invention may also be applied to the trading of a basket of instruments. For example, traders may place offers on the net price movements of the current two and five year U.S. Treasury notes.

20   [0026]   It should also be noted that the present invention is primarily described herein in terms of a trading application. It will be understood that the trading application may be any suitable, software, hardware, or both configured to implement the features

25   of the present invention. The trading application may be located at a central location (e.g., a central server). In another suitable approach, the trading application may reside among different locations (e.g., a network).

30   [0027]   Although the trading application is described herein as being implemented on user computer equipment, this is only illustrative. The trading application may be implemented on any suitable platform (e.g., personal

computer, palmtop computer, laptop computer, personal
digital assistant, cellular phone, etc.) to provide
such features.

[0028]   Further details of the invention are
described below with respect to FIGS. 1-5.

[0029]   Referring to FIG. 1, exemplary system 100 for
implementing the present invention is shown. As
illustrated, system 100 may include one or more
workstations 102. Workstations 102 may be local or
remote, and are connected by one or more communications
links 104 to communications network 103 that is linked
via communications links 108 to server 110. Server 110
is linked via communications link 112 to back office
clearing center 114.

[0030]   In system 100, server 110 may be any suitable
server, processor, computer, or data processing device,
or combination of the same. Server 110 may be used to
process and settle executed trades, and distribute
trade and market information to workstations 102.

[0031]   Communications network 106 may be any
suitable computer network including the Internet, an
intranet, a wide-area network (WAN), a local-area
network (LAN), a wireless network, a digital subscriber
line (DSL) network, a frame relay network, an
asynchronous transfer mode (ATM) network, a virtual
private network (VPN), or any combination of any of the
same. Communications links 104 and 108 may be any
communications links suitable for communicating data
between workstations 102 and server 108, such as
network links, dial-up links, wireless links, hard-
wired links, etc.

[0032]   Workstations 102 may be personal computers,
laptop computers, mainframe computers, dumb terminals,

data displays, Internet browsers, Personal Digital
Assistants (PDAs), two-way pagers, wireless terminals,
portable telephones, etc., or any combination of the
same.   Workstations 102 may be used to enter into and
5   proceed with the trades that relate to the present
invention, and display trade, benchmark, or spread
information to traders of system 100.

[0033]   Back office clearing center 114 may be any
suitable equipment, such as a computer, a laptop
10   computer, a mainframe computer, etc., or any
combination of the same, for causing trades to be
cleared and/or verifying that trades are cleared.
Communications link 112 may be any communications links
suitable for communicating data between server 110 and
15   back office clearing center 114, such as network links,
dial-up links, wireless links, hard-wired links, etc.

[0034]   The server and the back office clearing
center, and one of the workstations, which are depicted
in FIG. 1, are illustrated in more detail in FIG. 2.
20   Referring to FIG. 2, workstation 102 may include
processor 202, display 204, input device 206, and
memory 208, which may be interconnected.   In a
preferred embodiment, memory 208 contains a storage
device for storing a workstation program for
25   controlling processor 201.   Memory 208 also preferably
contains a trading application 210 in accordance with
the present invention.

[0035]   As shown in FIG. 2, trading application 210
may include an application program interface 212.
30   Alternatively, as described above, trading
application 210 may be resident in the memory of
server 110.   In such embodiments, the electronic
trading system may contain trading application 210 and

application program interface 212 as an application
that is discrete from the trading application, which
also may be included therein. The only distribution to
the trader may be a GUI which allows the trader to
5   interact with graphical trading interface
application 210 resident at server 110.

[0036]   Processor 202 may use the workstation program
to present on display 204 trade information relating to
bids, offers, executed trades, and luxury item
10 information to a trader of workstation 102.
Furthermore, input device 206 may be used by the trader
to enter such bids and offers, modify them, and to
enter into trades involving the futures and/or options
contracts.

15 [0037]   Server 110 may include processor 220, display
222, input device 224, and memory 226, which may be
interconnected. In a preferred embodiment, memory 226
contains a storage device for storing trade information
relating to the trades. The storage device further
20 contains a server program for controlling
processor 220. Processor 220 uses the server program
to transact the purchase and sale of the futures and/or
options contracts.

[0038]   Back office clearing center 114 may include
25 processor 228, display 230, input device 232, and
memory 234, which may be interconnected. In a
preferred embodiment, memory 234 contains a storage
device for storing a clearing program for controlling
processor 228. Processor 228 uses the clearing program
30 to clear executed trades. Clearing executed trades may
preferably include exchanging currency for a future
commitment or a future option.

[0039]   Input device 206 of workstation 102 may be used by traders in conjunction with display 204 to execute and monitor trades. It should be noted that trading is highly fluid and fast paced. Efficient input systems are important to effectuate the multiple options and to permits these levels of efficiency. Accordingly, input device 206 may include a keyboard with advanced features 300, as illustrated in FIG. 3.

[0040]   FIG. 3 is an illustrative schematic view of a keyboard in some embodiments of the present invention. Keys, such as the lower twelve issue keys 310, on keyboard 300 are preferably color-coded and labeled. In some embodiments, the programmable issue keys may be color-coded to differentiate each group of issue keys. For example, a group of issue keys (e.g., the "issue 1.1" key, the "issue 1.2" key, and the "issue 1.3" key) may be colored gray, while the next group of issue keys (e.g., the "issue 2.1" key, the "issue 2.2" key, and the "issue 2.3" key) may be colored dark gray.

[0041]   The lower twelve issue keys 310 are preferably pre-programmed to reflect the issues present in each trading quadrant, or "quad," where key trading indicators are displayed. A trader may use keyboard 300 to switch between multiple issues in a quad (e.g., the benchmark issue and non-benchmark issues). An illustrative trading quadrant is shown, for example, in FIG. 4. The four buy keys 315 and the four sell keys 320 may also be pre-programmed to match or complement each issue key. In some embodiments, each key may also be programmed using a MOD function. The MOD function may be implemented by, for example, pressing a function key along with a red MOD key 325.

[0042]   In some embodiments, keyboard 300 may also include price improvement functionality. Price improvement, in accordance with the present invention, enables one or more traders to improve on an existing market trading price. For example, consider a market in which several buyers and sellers are submitting bids and offers for a selected item at a predetermined price. When one of the traders hits or lifts a bid/offer posted by another trader, thereby activating the active trader's side of the market for that item, the price at which the trader hit or lifted the bid becomes the "touch" price of the market. The touch price is the active market price for a selected item. Once a trade has been initiated, other traders may submit orders that improve on the touch price. When a trader submits a price improved order on a selected item, that trader may "jump in front" of other traders in a buying or selling stack. When an order "jumps in front" of other orders or is put on top of the stack, that order is in a position to be executed (e.g., used to fill an order) first when a buyer decides to buy or a seller decides to sell. A stack lists various order sizes for a particular item, and is typically arranged according to a predefined set of parameters.

[0043]   As shown in FIG. 3, keyboard 300 includes a PI key 330 that provides the trader with the price improvement functionality. If desired, the PI key may be a BEST price improvement key. Submitting an order with a BEST price improvement level by, for example, pressing PI key 330, may automatically allow the order to jump in front of other prices in market that includes other price improved prices. The BEST price improvement function increases the order price at any

suitable increment (e.g., 0.25, 0.50, 0.75, etc.) that
is more aggressive than the price currently at the top
of the stack. In response to the trader pressing PI
key 330 multiple times, the price improvement function

5   may be toggled to increase the order price at a
predetermined increment (e.g., 0, 0.25, 0.50, 0.75,
etc.).

[0044]   Systems and methods for providing price
improvement in an active trading market are also

10   described, for example, in co-pending, commonly-
assigned Sweeting U.S. Patent Application
No. 10/171,009, filed June 11, 2002, which is hereby
incorporated by reference herein in its entirety.

[0045]   In some embodiments, keyboard 300 may also

15   include direct dealing (hereinafter "DD"), or request
for quote functionality. In DD style trading, there
are requestors and responders. A requestor may enter a
request to deal on a particular item at the midpoint of
the spread market, thereby providing an affirmative

20   interest to trade at the midpoint. The requestor may
enter a request with a specific midprice buy or sell
order, or a requestor may request a midprice order to
trade a specified size without indicating an interest
to buy or sell. A responder may respond to that

25   request by submitting an order to buy or sell the item
at the midprice.

[0046]   As shown in FIG. 3, keyboard 300 includes a
DD key 330 that provides the trader with the direct
dealing functionality. Direct dealings pertaining to

30   each tab in the quad (e.g., tabs 426-432 in quad 410 of
FIG. 4) may be accessible by, for example, pressing DD
key 330. For example, in response to a trader viewing
the "off-the-run issues" (by selecting the "off-the-

run" tab), the trading application may provide the trader with the direct dealings (or request for quotes) pertaining to the off-the-run issues.

[0047]   Using DD key 330 and the other keys on keyboard 300, the trader may perform such functions as request a quote, respond with a price, cancel a response, amend a response, or accept a response. For example, to request a quote, the trader may press one of the issue keys 310 and then press DD key 330. The user may be prompted to enter a size. In response to entering a size and pressing one of the buy keys 315 or sell keys 320, the trading application may request a quote based on the entered information. In another example, the trader may direct the trading application to scroll through available direct dealings by pressing DD key 330 multiple times.

[0048]   Systems and methods for providing a trading interface with a request for quote (RFQ) functionality are also described, for example, in co-pending, commonly-assigned Gilbert et al. U.S. Patent Application No. 10/113,841, filed in March 29, 2002, which is hereby incorporated by reference herein in its entirety.

[0049]   In some embodiments, keyboard 300 may include a VIEW key. In response to a trader pressing the VIEW key, the trading application may provide the trader with available views of the quad. For example, in response to the trader pressing an issue key, the trading application may provide the trader with the associated quad. In response to the trader subsequently pressing the VIEW key, the selected quad may cycle between different views (e.g., a curve quad, a t-swaps quad, an olds quad, etc.). Curves, such as a

yield curve, may be used by traders to view the overall movement of interest rates or yields. In some embodiments, the quad may initially display the view that the trader last displayed.

5   [0050]   However, any other suitable approach may also be used for displaying the quad. For example, the trading application may display the view that the trader most frequently viewed or the most popular view.

[0051]   In some embodiments, keyboard 300 may include
10   a STATUS TOGGLE key. In response to a trader pressing the STATUS TOGGLE key, the trading application may provide the trader with the trade history of the item or instrument. In response to the trader pressing the STATUS TOGGLE key multiple times, the trading
15   application may cycle or toggle through different information relating to the item or instrument, such as, for example, the active orders for the item or instrument, the market history, or the status of the item or instrument.

20   [0052]   Keyboard 300 also preferably includes a SHIFT key and an ALT key. The SHIFT key may direct the trading application to provide the trader with a snapshot or summary of the limit order stacks for the selected item or instrument. The ALT key may allow the
25   trader to further program other functionality into keyboard 300. For example, a trader may implement other functions by, for example, holding down the ALT key and another key.

[0053]   In some embodiments, the trading application
30   may retrieve a keyboard mapping file from, for example, the trader's workstation. The trading application may read the keyboard mapping file and assign the keys of keyboard 300 to particular functions and/or macros. In

some embodiments, the trading application may allow the
trader to edit the keyboard mapping file to customize
keyboard 300.

[0054]   In the foregoing specification, keyboard 300
has been described with reference to specific
embodiments. It will be understood that the
arrangement of the keys, the color-coding of the keys,
the key labels, and the functionality of the keys are
illustrative examples. However, one of ordinary skill
in the art appreciates that various modifications and
changes can be made without departing from the scope of
the present invention as set forth in the claims below.
Accordingly, the specification and figures are to be
regarded in an illustrative rather than a restrictive
sense, and all such modifications are intended to be
included within the scope of present invention.

[0055]   As described previously, issue keys 310 are
preferably pre-programmed to reflect the issues present
in a trading quadrant, or "quad," where key trading
indicators are displayed. A trader may use issue
keys 310 to direct the trading application to switch
between multiple issues in a quad.

[0056]   FIGS. 4 and 5 show illustrative interfaces
for interactive trading that are adapted for
implementing systems and methods according to the
present invention. In response to initiating the
trading interface, the trading application may display
the four benchmark U.S. Treasury bonds in a four quad
layout. As shown in FIG. 4, the trading interface has
four quads 410, 440, 450, and 460 which provide trading
information related to the two year U.S. Treasury note,
the five year U.S. Treasury note, the ten year U.S.

Treasury note, and the thirty year U.S. Treasury bond, respectively.

[0057]   Each quad provides the trader with trading information. As shown in the two year U.S. Treasury note quad 410, quad 410 includes a headline 412. Headline 412 is preferably adapted to include the price that should be initially aggressed to start a trade or the actual aggressed trade. In either case, the headline is generally located at the top of the quad. The headline may include the item (e.g., "USG_02Y), the price, the size, and the last price for the benchmark issue. The benchmark issue (also referred to herein as the "on-the-run issue") is the most recently auctioned Treasury issues for each maturity. Also shown in quad 410 are bid and offer stacks 414 and 416, respectively. Bid and offer stacks 414 and 416 may indicate the size of one or many market participants that are bidding or offering at the current price.

[0058]   As shown in FIG. 4, under the benchmark issue, the trading application may provide the trader with a T-swaps lock price 418 (e.g., L 100.032) on the benchmark. (T-Swap trading relates to a chosen price movement relationship between two different instruments). Quad 410 may also include any other suitable trading information, such as market depth information, which shows price and size for items that have not yet been traded.

[0059]   The T-swaps lock price 418 is L 100.032 in FIG. 3. As known in the art, U.S. Treasury bonds are traded at a percentage of a bond's face value. This percentage is typically broken down into 32nds of a point and fractions thereof. The prices shown in FIGS. 4 and 5 represent the whole number portion and

the percentage being traded. For example, consider the price "100.032." The number left of the decimal point ("100") is equivalent to the whole number portion of the price and the number right of the decimal point ("032") is equivalent to the fractional portion. More particularly, the first two digits right of the decimal point ("03") represent the number of 32nds and the third digit represents the number of 8ths of a 32nd. In this case, the fraction appended to the whole number portion of the price is 3/32nd and 2/8th of a 32nd. Note that some prices may have "+" in the third digit right of the decimal point. The "+" may represent 4/8ths of a 32nd or half a 32nd, and may be displayed in this instance instead of a "4."

[0060]   Quad 410 and other quads generally may also include non-benchmark issues 420, 422, and 424 (e.g., issue 1.1, issue 1.2, and issue 1.3) that may be selected in response to the trader, for example, pressing one of the issue keys 310 on keyboard 300.

[0061]   The trading application may also provide the trader with tabs for each of the related U.S. Treasury Swaps (T-swaps), off-the-runs (i.e., Treasury bonds issued before the most recently issued bond of a particular maturity), yield curve T-swaps, and basis. As shown in FIG. 4, each quad 410, 440, 450, and 460 includes a "Basis" tab 426, a "Swaps" tab 428, an "Olds" tab 430, and a "Curve" tab 432.

[0062]   In response to the trader selecting "Basis" tab 426, the trading application may provide the trader with a basis quad. The basis quad preferably contains the benchmark issue, "one-old" basis item or instrument, and the cheapest-to-deliver (CTD) bond.

When a bond matures, the seller has to deliver the underlying instrument. It is necessary to deliver a bond with the same characteristics. In some embodiments, certain futures contracts may require cash

5   delivery. That is, a requirement of certain futures contracts is that the underlier should not be delivered to the buyer at maturity, and instead the value of the underlier should be paid out. Accordingly, a seller preferably finds the CTD bond from bonds available in

10 the basket of deliverable bonds.

[0063]   Generally, if the yield for the CTD bond changes by a given amount, the benchmark issue's yield also changes by a similar amount. It should be noted that the CTD bond may change quarterly. In some

15 embodiments, the CTD bond may change intra-quarter.

[0064]   In response to the trader selecting "Swaps" tab 428, the trading application may provide the trader with a treasury swaps ("T-swaps") quad. The T-swaps quad preferably includes the three most recent

20 benchmark bonds, where the oldest benchmark bond is replaced by the usg+0XY/XY T-swap (e.g., usg+05Y/05Y) when it becomes available. The T-swaps quad may also include the "pick up" and "give up" indicated yield spreads. The T-swaps quad, similar to the benchmark

25 quad described previously and generally other quads, includes the T-swaps lock price bond and its associated lock price.

[0065]   In response to the trader selecting "Olds" tab 430, the trading application may provide the trader

30 with an off-the-runs quad. The off-the-run quad preferably includes the three most recent benchmark bonds, where the oldest benchmark bond is replaced by

the usg+0XY instrument (e.g., usg+05Y) when it becomes available.

[0066]   In response to the trader selecting "Curve" tab 432, the trading application may provide the trader with a curve quad. The curve quad preferably includes the yield curve T-swaps relevant to the benchmark selected. Yield curves provide traders with comparisons of the interest rate on instruments of different maturity. For example, if a trader thinks it is riskier to buy a bond with fifteen years until it matures than a bond with five years of life, the trader will demand a higher interest rate (i.e., yield) on the longer-dated bond. If such is the case, the yield curve will slope upwards from the shorter maturities (the left side of the curve) to right. Generally, the yield curve slopes upward because traders demand compensation for the added risk of holding longer-term instruments. Information may be gleaned from changes in the spreads between yields on bonds of different maturities and on different sorts of bonds with the same maturity.

[0067]   The information contained in each quad is as follows, where the issue listed in the replacement column replaces the previous instrument (e.g., the top

off-the-run bond) when it becomes available or active:

Item	OLDS	Replacement	Swaps	Replacement	Curve
2Y	usg-302Y	usg+02Y	usg-302Y/2Y	usg+02Y/2Y	usg_02Y/5Y
	usg-202Y		usg-202Y/2Y		usg_02Y/10Y
	usg-102Y		usg-102Y/2Y		usg_02Y/30Y
5Y	usg-305Y	usg+05Y	usg-305Y/5Y	usg+05Y/5Y	usg_02Y/5Y
	usg-205Y		usg-205Y/5Y		usg_05Y/10Y
	usg-105Y		usg-105Y/5Y		usg_05Y/30Y
10Y	usg-310Y	usg+10Y	usg-310Y/10Y	usg+10Y/10Y	usg_02Y/10Y
	usg-210Y		usg-210Y/10Y		usg_05Y/10Y
	usg-110Y		usg-110Y/10Y		usg_10Y/30Y
30Y	usg-330Y	usg+30Y	usg-330Y/30Y	usg+30Y/30Y	usg_02Y/30Y
	usg-230Y		usg-230Y/30Y		usg_05Y/30Y
	usg-130Y		usg-130Y/30Y		usg_10Y/30Y

TABLE 1

5   [0068]   As described previously, the trading
application may also provide the trader with direct
dealing functionality. The trading application in
which each quad operates may determine which DD orders,
if any, are matched to each other. In order for DD
10   orders to match, two orders have to be contra or
opposite to each other. A buy DD order is contra to a
sell DD order.

[0069]   For example, assume that the requesting
midprice DD order is a buy DD order with a size of 100.
15   After the midprice interest is displayed, one or more
market participants or traders may submit a midprice DD
order (e.g., responding DD orders). If a second
midprice DD order is a buy order for 100, that order is
queued behind the initial order. Because both the
20   initial and second orders are buy orders, the
requesting order is queued first because it was
submitted before the second order. If a midprice DD
sell order of size 150 is received, the initial buy
order is matched with a portion of the sell order and
25   half of the second buy order is used to fill the sell

order. As a result, a buy DD order of size 50 is currently available for midprice trading.

[0070]   Each quad 410, 440, 450, and 460 preferably includes a direct dealing ("DD") ticker 434. DD ticker 434 may include the orientation and size of the order. DD ticker 434 preferably changes its content according to the progression of the direct dealing. Table 2 below shows several examples of ticker content.

On request	
B100	when requesting a price on 100 million to buy
S100	when requesting a price on 100 million to sell
T100	when requesting a price on 100 million two-way price
M100	when requesting a bid/offer liquidity spread ("BOLS") that includes a spread value (or a bid value and an offer value that define a spread) -- i.e., make me a certain market spread and I will guarantee to trade
On response	
B100 101.24+	when the response is a bid for 100 million
S100 101.24+	when the response is an offer (ask) for 100 million
T100 101.24+-252	when the response is a 101.24+ bid, 101,252 offer in 100 million
M100 101.24+-/252	when the (BOLS) response is 101.24+ bid, 101.252 ask in 100 million
On acceptance/rejection	
t100	you traded 100 million
m100	100 million were traded, but you missed it
c100	100 million direct dealing was cancelled

TABLE 2

[0071]   It should be noted that the direct dealing ticker contains real-time information on the progress

of the direct dealing. The real-time information relating to the direct dealing may be displayed using any suitable approach.

[0072] FIG. 6 is a flow chart of an illustrative method involved in allowing a trader to switch between multiple issues (e.g., issue 1.1 to issue 1.2) in accordance with some embodiments of the present invention. This is a generalized flow chart. It will be understood that the steps shown in FIG. 6 may be performed in any suitable order, some may be deleted, and others added.

[0073] At step 600, the trading application may be initiated and may provide the trader with an initial display. The initial display may provide traders with opportunities to log in, or may provide traders with access to other system features. In some embodiments, traders may be required to log in by, for example, entering a user name and a password. In other embodiments, traders may not be required to log in to access the features of the system.

[0074] At step 610, the trading application may display a trading quadrant ("quad") that has a benchmark issue and multiple non-benchmark issues. The benchmark issue is currently selected. Along with providing the benchmark issue and non-benchmark issues (e.g., issues 1.1, 1.2, and 1.3), the trading application may also provide the trader with the ability to obtain trading information (e.g., another quad) for each of the related U.S. T-swaps, off-the-runs, yield curve T-swaps, and basis.

[0075] At step 620, the trading application may provide the trader with the ability to select one of the multiple non-benchmark issues by pressing the

associated issue key on the keyboard, such as
keyboard 300, that is mapped to the selected non-
benchmark issue. For example, the trader may direct
the trading application focus and display trading

5   information on non-benchmark issue 2.1 in response to
the trader pressing the issue 2.1 key on the keyboard.
The issue 2.1 key is mapped to non-benchmark issue 2.1.

[0076]   FIG. 7 is a flow chart of an illustrative
method involved in providing a trader with real-time

10   direct dealing information in accordance with some
embodiments of the present invention. This is a
generalized flow chart. It will be understood that the
steps shown in FIG. 7 may be performed in any suitable
order, some may be deleted, and others added.

15   **[0077]**   At step 700, the trading application may also
provide the trader with direct dealing functionality.
The trading application may receive direct dealing
content for use in the trading quadrant. For example,
a trader can submit a midprice direct dealing order,

20   thereby making a bid/offer at the midprice. Once the
order is entered, the trading application may display
the start price (i.e., the midprice of the spread at
the time the midprice direct dealing order was
entered). At step 710, in response to receiving the

25   direct dealing order, the trading application may
update the direct dealing content in the direct dealing
ticker to indicate to other traders that a midprice
direct dealing order has been submitted. Other traders
may submit responses to the midprice request. That is,

30   traders may respond by submitting a buy or sell command
with a particular size. Note that any number of
traders may respond and the time at which the traders

respond determines when the response will be matched, if it is matched at all.

[0078]   At step 720, the trading application may simultaneously display the trading quadrant and the updated direct dealing ticker. In response to receiving responses and matching requests with responses, the trading application continuously updates the direct dealing content in the direct dealing ticker, thereby providing traders with a real-time progression of the direct dealing.

[0079]   Thus, systems and methods for providing a trading interface with advanced features are provided. Persons skilled in the art will appreciate that the present invention can be practiced by other than the described embodiments, which are presented for purposes of illustration and not of limitation, and that the present invention is limited only by the claims which follow.